

```
1 public void getMaxProfit() {
2
3     // sort identifiers based on the the v/w of the items they refer to
4     List<Integer> identifierList = Arrays.stream(identifiers)
5         .boxed()
6         .collect(Collectors.toList());
7     @SuppressWarnings("unchecked")
8     ArrayList<Integer> sortedIdentifiers = new ArrayList(identifierList);
9     Collections.sort(sortedIdentifiers, (right, left) ->
10         Double.compare(vWRatio[identifierList.indexOf(left)],
11             vWRatio[identifierList.indexOf(right)]));
12     int tempCapacity = 0, removed = -1, tempValue = 0;
13
14     int[] pickedUpItems = new int[n]; // to store picked up items,
15     // initialized to 0s by jvm
16     // keep picking up the highest v/w item until we run out of capacity
17     while (tempCapacity < capacity && !sortedIdentifiers.isEmpty()) {
18         removed = sortedIdentifiers.remove(0);
19         if (tempCapacity + weights[removed - 1] <= capacity) {
20             pickedUpItems[removed - 1] = 1;
21             tempValue += values[removed - 1];
22             tempCapacity += weights[removed - 1];
23         }
24     }
```